capture multiple rooms, larger areas, etc., based on good camera placement), and the like. This is possible because the system, when aware of each room, their corresponding areas, and field-of-view (FOV) of the camera, can calculate (e.g., via processor(s) **2110**) effective placement locations.

[0167] In another example, knowing the dimensions of the room (and to some degree the objects that inside it, like sofas, chairs, etc.), some systems may guide a user by identifying one or more locations on the digital floor plan to place speakers that can improve an acoustical response of the sound system or even reduce floor and/or wall vibrations per a renter's agreement or city ordinance. For instance, room acoustics may be determined based on room dimensions, wall heights, room shape, acoustic reflections, etc., which all can be determine based on the various sensors described above (e.g., microphones, dimension data, media system capabilities, or the like). In some cases, the system may incorporate active real-time noise cancellation for a user based on a detected location of the user, a known floor plan of the corresponding room, and a known location of one or more speaker elements within the room, as would be appreciated by one of ordinary skill in the art with the benefit of this disclosure. In another embodiment, a system **2000** may be configured to detect ambient light in one or more rooms via one or more image sensors (e.g., video camera configured as a modular accessory). Thus, at certain times of the day system **2000** may close window blinds to reduce glare on a television, or may alter one or more lighting elements to adjust for changing ambient lighting conditions.

[0168] Such embodiments may support the use of abstracted user instructions, which is made possible at least in part by the generated floor plan. For instance, a user may simply say "Reduce TV glare." In response, the system may determine a location of light sources in the room (e.g., via image sensors), determine a location of the user (e.g., via virtual trip wires, microphone(s), image sensors, conductive EMI, etc.), determine a location of the television (e.g., via image sensors, microphone(s), power profile, etc.) and identify light sources that are the cause of the television glare (e.g., image sensors, known locations of light sources from the floor plan, etc.). In such cases, the system may close the shades, turn off or reduce lights that are located in an area (e.g., behind the user and in front of the television) that may contribute to television glare, and configure lighting (e.g., change color, intensity, etc.) that can reduce television glare (e.g., lights behind the television). Conventional systems would be unlikely to perform these tasks as it takes into account real-time inputs including a location of a user and adjusts according to potentially unique conditions each time. For instance, a user sitting directly in front of a television would likely have different lighting conditions to reduce glare than a person watching from a different angle. The systems described herein can accommodate for such conditions in real-time for a single user, multiple users, etc., for a contextually aware solution to a request. Further, system generated solutions do not require the identification of specific devices. The user does not need to identify which television, lights, or sounds as the system can track the user's location, contextually determine which television is likely viewing, analyze the ambient light conditions relative to the television and user, and make corresponding adjustments to achieve the requested result. Thus, the same command made in a different room can also achieve the same outcome (e.g., reduce the glare), but would likely achieve that outcome in a different manner given the likely different room dimensions, acoustics, lighting conditions, and the like. An example of this contextual response to a user request is described below with respect to FIG. **23**.

[0169] Another example of a contextual response to an abstracted request can include changing operational parameters in real-time. For example, if a user was watching a sports channel in the living room and walks into the kitchen, the system may route the audio from a stereo system in the living room to speakers in the kitchen so that the user can still listen to the sports coverage despite not seeing the video. An example of this is shown below with respect to FIG. **24**. In another scenario, if the user is watching a movie and walks towards the bathroom (e.g., as detected by virtual tripwires), the system may pause the movie, turn up the lights including a lighted path to the bathroom, and await the user's return before continuing playback of the movie. In some embodiments, contextual decisions can be modified by user preferences and/or system preferences. For instance, a user may indicate playback options for movies, sports media, music, preferred lighting conditions for a particular setting (media or otherwise), and the like, and the system will contextually respond to a request under the framework defined by the user/system preferences. In each case, the system can be contextually aware of the appropriate course of actions based on the context where the request is made, as described in the examples above. Preferences can be associated with particular users, rooms, or a combination thereof. User preferences may have hierarchically defined to give certain users priority over others. For instance, the system may play media according to a first user with a higher priority than a second user, despite both the first and second user being present at the same time.

[0170] FIG. 23 is a simplified diagram showing a scene **2300** with a system configured to modify media accessories and lighting for a user based on their detected location, according to certain embodiments. Scene **2300** includes living room **2030** with user **2305** seated on a chair and viewing display device **2320**. Audio system **2330** can include surround sound speakers (**1**)-(**4**). The system further includes light sources **2340**(**1**)-(**3**) and window shades (e.g., blinds) **2350**. The scene **2300** may utilize system **2000**, which can incorporate aspects of the systems of FIGS. **6-19**, as described above. Referring to FIG. **23**, system **2000** identifies user **2305** via any suitable method including, but not limited to, image sensing, device unique ID tracking, audio detection, virtual tripwires, heartbeat monitoring, or the like. User **2305** is watching display device **2320** and system **2000** may configure the audio system to perform three-dimensional auto-location, such that the audio output by surround sound speakers **2330**(**1**)-(**4**) are directionally configured to improve audio acoustics at the location of user **2305**, which may change in real-time as user **2305** moves throughout room **2030**. Light sources **2340**(**1**)-(**3**) may be set to minimize glare at user **2305**'s location and, in some cases, change a lighting scheme per user **2305** preferences.

[0171] FIG. **24** is a simplified diagram showing a transition of media and lighting as a user transitions from first room to a second room, according to certain embodiments. As user **2405** moves from living room **2030** to kitchen **2040**, system **2000** contextually updates video, audio, and lighting settings so accommodate the user's surroundings. For instance, kitchen **2040** may have audio and lighting capabilities, but no video devices. System **2000** may transfer the